

THREE NEW GALL MIDGES (DIPT.).

By E. P. FELT,

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The three species of Itonidæ described below were reared from a section of a dead, partly decayed wild fig branch collected at Paraiso, Panama, by Mr. E. A. Schwarz, in connection with the biological survey of the isthmus under the auspices of the Smithsonian Institution. Many of the specimens were reared by Mr. H. S. Barber at Washington, while a few issued from material sent the writer. The types will be deposited in the National Museum.

Holoneurus occidentalis, new species.

Larva.—Length 3 mm., slender, reddish orange, with distinct and widely separated pseudopods. Head moderately large and with long antennæ, the latter with a length four times the diameter. The dorsal part of the head appears to be chitinized and attached thereto are submedian, strongly curved, stout, hooked, chitinous processes. The head is ornamented with a number of long, slender setæ. Skin coarsely shagreened: breastbone distinct, expanded anteriorly, bidentate posteriorly, tapering to a rudimentary extremity; each segment with a transverse series of six long setæ dorsally near the posterior margin, and laterally with one or two setæ near the anterior third; the posterior extremity broadly rounded and on each side three submedian tubercles, each bearing a long seta.

Male.—Length 1 mm. Antennæ a little longer than the body, sparsely haired, yellowish brown; 16 segments, the fifth having a stem one-fourth longer than the cylindric basal enlargement, which latter has a length over twice its diameter, a sparse basal whorl of short setæ and a rather thick sub-apical whorl of much longer, stout setæ; terminal segment reduced. Palpi; first segment quadrate, with a length over twice its diameter, the second stouter, one-half longer than the first, the third one-half longer than the second, more slender, the fourth a little longer and more slender than the third. Mesonotum fuscous yellowish. Scutellum yellowish red, postscutellum yellowish. Abdomen mostly fuscous yellowish. Wings hyaline, costa pale straw, the third vein uniting therewith at the apex of the wing, the fifth simple. Halteres yellowish transparent. Coxæ and legs pale straw, the distal tarsal segments somewhat darker. Genitalia: basal clasp segment short, stout, truncate; terminal clasp segment short, stout, broadly rounded and spinose apically; dorsal plate rather long, deeply and roundly emarginate, the lobes obliquely rounded distally; ventral plate bilobed. Harpes linear, chitinous; style short, stout, narrowly rounded apically.

Female.—Length 1.5 mm. Antennae extending to the second abdominal segment, sparsely haired, fuscous yellowish, the basal segments yellowish; 16 segments, the fifth having a stem about one-third the length of the subcylindric basal enlargement, which latter has a length about twice its diameter, a rather thick subbasal whorl of long, stout setae and a scattering, subapical band of slender setae; terminal segment with a length about three times its diameter, narrowly separated from the preceding and tapering to a subacute apex. Claws long, slender, evenly curved, unidentate, the pulvilli rudimentary. Ovipositor when extended about one-third the length of the abdomen, the terminal lobes slender, indistinctly triarticulate, the distal segment with a length about three times the diameter and sparsely setose.

Type Cecid a2177b, N. Y. State Museum.

Several specimens of this midge were reared the latter part of May, 1911. It is allied to *H. clongatus* Felt, from which it is separated by the shorter stems of the antennal segments.

***Lasipteryx schwarzi*, new species.**

Male.—Length 1 mm. Antennae nearly as long as the body, thickly haired, dark brown; 12 segments, the fifth with a stem about three-fourths the length of the cylindric basal enlargement, which latter has a length one-half greater than its diameter, a sparse subbasal whorl of rather short setae and a thick subapical band of long, slender setae; terminal segment somewhat produced, fusiform, with a length about three times its diameter. Palpi; first segment irregularly subquadrate, the second with a length nearly three times its diameter, the third a little longer, more slender, the fourth nearly one-half longer than the third, slender. Mesonotum shining dark brown. Scutellum reddish brown, sparsely haired, postscutellum darker. Abdomen mostly dark brown, the distal segments and genitalia more or less yellowish orange. Wings subhyaline, the membrane rather thickly scaled, costa dark brown or black; the third vein unites with costa near the distal ninth; the fifth joins the posterior margin at the distal fifth, its branch near the basal third. Halteres yellowish orange. Coxae, femora and tibiae mostly yellowish orange, the tarsi dark brown. Claws rather long, slender, evenly curved, unidentate, the pulvilli about one-half the length of the claws. Genitalia; basal clasp segment rather long, moderately stout, truncate; terminal clasp segment somewhat swollen basally, strongly curved apically; dorsal plate long, deeply and triangularly incised, the lobes tapering to a narrowly rounded, sparsely setose apex; ventral plate long, broad, broadly and roundly emarginate, the lobes sparsely setose. Harpes rather long, slender, with a long, stout, chitinous process apically; style rather long, broad, truncate distally.

Female.—Length 1.4 mm. Antennae extending to the base of the abdomen, sparsely haired, fuscous yellowish; 12 subsessile segments, the fifth subcylindric, with a length about twice its diameter, tapering slightly distally, with a sparse subbasal whorl of moderately stout setae and a scattering subapical band of longer, more slender setae; terminal segment reduced, sub-

fusiform, with a length about $2\frac{1}{2}$ times its diameter. Mesonotum shining dark brown. Scutellum reddish brown, postscutellum fuscous yellowish. Abdomen dark reddish brown, the ovipositor yellowish, longer than the abdomen; terminal lobes with a length about $2\frac{1}{2}$ times the width and tapering slightly to a broadly rounded, sparsely setose apex; minor lobes short, obtuse. Other characters practically as in the male.

Type Cecid a2177, N. Y. State Museum.

Numerous midges were reared in the spring of 1911. This species is easily separated from the allied *L. flavotibialis* Felt by the larger number of antennal segments and marked differences in coloration.

Hyperdiplosis americana, new species.

Larva.—Length 1 mm., a variable yellowish orange, moderately stout. Head rather slender, the antennæ stout, with a length about three times the diameter; breastbone short, indistinctly trilobed; ocular spot indistinct; skin coarsely shagreened, the body segments each with a moderately stout seta laterally, posterior extremity bilobed, the apex of each lobe slightly chitinated.

Male.—Length 1 mm. Antennæ one-half longer than the body, thickly haired, light brown; 14 segments, the fifth having the two portions of the stem, each with a length fully thrice the diameter, the basal enlargement subglobose, with a thick subbasal whorl of long, stout setæ and a slender subapical circumfilum, the loops of the latter extending to the base of the slightly produced distal enlargement, which latter has a length one-half greater than its diameter, a thick whorl of long, stout setæ and subbasal and subapical circumfili, the loops of the subapical filum extending to the base of the following segment; terminal segment produced, basal portion of the stem with a length five times its diameter, the distal enlargement cylindric, with a length three times its diameter and apically a long, fingerlike process. Palpi; first segment subquadrate, the second twice the length of the first, slender, the third as long as the second, more slender, the fourth about as long as the second. Body pale yellowish. Wings yellowish, the third vein uniting with costa well beyond the apex of the wing. Halteres pale yellowish. Coxæ and base of femora whitish transparent, the distal portion of femora, tibiæ and tarsi pale yellowish. Claws stout, strongly curved, simple, the pulvilli about two-thirds the length of the claws. Genitalia; basal clasp segment rather slender, truncate; terminal clasp segment long, slender; dorsal plate short, deeply and narrowly incised, the lobes broadly emarginate, produced laterally, the angles each with a stout seta; ventral plate long, very deeply and roundly emarginate, the lobes slender, parallel and with a length fully five times the width; style long, slender, narrowly rounded.

Female.—Length 1.2 mm. Antennæ one-fourth longer than the body, sparsely haired, light brown, the stems whitish, the fifth with a stem a little longer than the subcylindric basal enlargement, which latter has a length about $2\frac{1}{2}$ times its diameter and subbasal and subapical whorls of rather long, stout setæ; terminal segment produced, the basal enlargement subcylindric,

with a length five times its diameter and apically with a rather stout, fusiform appendage. Ovipositor short, the terminal lobes narrowly ovate and sparsely setose apically. Other characters practically as in the male.

Type Cecid a2177a, N. Y. State Museum.

This small, pale midge was reared in some numbers from May 31 till early in June, 1911. This species is allied to the somewhat aberrant *H. cupatorii* Felt and cannot be considered typical of the genus. It is easily recognized by the very greatly produced, slender lobes of the ventral plate.

A NEW SPECIES OF LUPERODES.

BY CHARLES W. LENG,

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Among the beetles collected in the mountains of Georgia in July, 1910, by Mr. William T. Davis, are three specimens belonging to the genus *Luperodes* which resemble in most respects *L. thoracicus* Mels., but differ in being smaller and in color superficially, and in the proportion of the joints of the antennæ and tarsi structurally. There is also a marked difference in the width of the thorax. For the new species represented by these specimens I propose the name *Luperodes davisi* in recognition of the many discoveries in Natural History made by my life-long friend. The complete description is as follows:

Luperodes davisi, new species.

Form oval, slightly oblong, dark piceous, head, thorax, femora, first three joints entirely and base of outer joints of antennæ rufotestaceous. Antennæ with the third joint one and a half times as long as second joint, the two together longer than the fourth. Head smooth, the transverse impression straight, not reaching the eyes, the carina between the antennæ sharply defined. Thorax a little wider than long, not narrowed in front, sides strongly arcuate, hind angles not prominent, rounded, disc moderately convex, sparsely obsoletely punctulate, margin slightly reflexed. Elytra nearly twice as long as wide, sides feebly arcuate, surface smooth, sparsely obsoletely punctate. Body beneath, except pro- and mesothorax, black. Legs black, femora and under side of tibiæ fuscous. Length 3.5 mm. = .14 inch. Female has last ventral oval at tip; male unknown.

The type is in the collection of Mr. Davis and was found near Clayton, Rabun Co., Georgia, elevation, 2,000 ft. Two specimens